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ABSTRACT

Cooperative learning, as it was constructed in three seventh-grade classrooms in a multi-ethnic middle school, was examined as part of a dissertation study that focused on cooperative learning as embedded in its sociocultural context. Data were gathered using ethnographic methods, including participant and nonparticipant observations, document analysis, interviews, and audio recordings. The data were then constructed into vignettes of life in each of the three classrooms. The results suggest that the subject matter and social participation structure of cooperative learning are inextricably linked. However, the necessity of formal cooperative learning structures and procedures is questioned. Cooperative learning approach, subject matter, academic tasks, students' behavior and interactions, teachers' management styles, and other factors interacted in the three classrooms to constitute the enacted curricula, each providing markedly different learning opportunities. Teachers need to give careful consideration to the kinds of academic tasks that students work on in small groups to provide motivating, meaningful content that supports thinking and sharing of ideas. Contains 42 references. (MDM)

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IS "COOPERATIVE LEARNING" EITHER, BOTH, OR NEITHER?

TALES FROM THREE MIDDLE SCHOOL CLASSROOMS

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Is "Cooperative Learning" Either, Both, or Neither?
Tales from Three Middle School Classrooms

Abstract

This study describes "cooperative learning" as it was constructed in three seventh grade classrooms in a multi-ethnic middle school. Two of the classes shared the same students, and one had a considerably different student population in terms of race/ethnicity and ability-group distribution. Data were collected over a two-year period. Findings suggest that educators and teacher educators should view cooperative learning as more than a set of procedures for instruction, but rather, as a complex, context-embedded process. Furthermore, cooperative learning should be examined in terms of a holistic model of curriculum that encompasses both subject matter and social participation structure. Careful consideration should be given to the kinds of academic tasks which students work on in small groups to provide motivating, meaningful content that supports thinking and sharing of ideas. In addition, teachers need to be watchful for patterns of exclusion that may develop in their student groups, classrooms and schools. Findings in this study question the necessity of formal cooperative learning structures and procedures.

Background

The title of this paper is somewhat facetious, for as Erickson (1986a) notes, students always learn *something*, it is just a question of *what*. However, to be more specific, cooperative learning, or any instruction, may contribute to little or no *worthwhile* learning, or may avail only some students of such learning. In addition, cooperative learning, despite its name, may be very *un*-cooperative. Hence, this paper examines the kinds of learning constructed in cooperative learning classrooms, and the ways in which these classrooms are or are not cooperative.

Cooperative learning has become very popular in American schools (Bossert, 1988). It has an impressive research record of promoting positive inter-group relations, higher achievement and improved attitudes toward learning (Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; Slavin, 1983). The term "cooperative learning" applies to a family of researcher-designed instructional approaches (cf. Johnson & Johnson, 1987; Kagan, 1989; Slavin, 1983) which call for small groups of students to work with minimal teacher direction on academic tasks. However, there are a number of problems with the cooperative learning research base. One problem is that the majority of research into cooperative learning has been conducted in the form of researcher interventions with pre-post instruments. This leaves a gap in our understanding of what is constructed as cooperative learning by students and teachers under regular classroom conditions (Bossert, 1988). Work by Graybeal and Stodolsky (1985) has shown that this form of instruction can take on a great variety of local interpretations in addition to its official ones leaving us to wonder what is being done in the name of cooperative learning in various contexts. Additionally, the psychological basis of most cooperative learning research cannot account for social and cultural influences on the construction of cooperative learning participation structures, or the explicit and implicit rules by which participants organize their interactions (Erickson, 1982; Mehan, 1979).

The collective, inclusive and cooperative norms of cooperative learning approaches seem to lend them particularly well to participation by language minority students (Slavin, 1990; McGroarty, 1989), Latinos (Kagan, 1984; Slavin, 1983), and females (Gilligan, 1982). However, patterns in the extant research underscore the necessity of carefully examining local sociocultural contexts. For example, inter-group relations research (Gonzales, 1979; Slavin &

Oickle, 1981; Weigel, Wiser & Cook, 1975) suggests that Caucasians' attitudes toward other groups may be more positively affected by cooperative learning than Latinos' and African Americans' attitudes. Conversely, Latino and African American students have evidenced substantially greater achievement gains than Caucasians in several studies (Gonzales, 1979; Slavin & Oickle, 1981; Weigel, et al, 1975). Thirdly, gender has been associated with differential attitudes, interaction patterns and achievement in cooperative learning, in each case to the disadvantage of girls (Johnson, Johnson, Scott & Ramolae, 1985; Webb, 1984, 1989). Keeping the meaning of "cooperative learning" as problematic rather than accepting it as a given permits examination of what is constructed under this label, thereby making it possible to illuminate the ways in which such patterns and norms are developed.

Methods

This paper is drawn from a larger dissertation study which focused on cooperative learning as embedded in its sociocultural context. Site selection was criterion-based (Goetz and LeCompte, 1984), with ethnic diversity and cooperative learning instruction being the primary criteria. The study was conducted at Banner Middle School in an industrial, working class municipality in a large Western metropolitan area.[1] The school population was 52% Caucasian and 48% minority, mostly Mexican American. Some two-thirds of the students received federal lunch support. Mr. Gallo, a seventh grade math and social studies teacher at Banner, had the most highly articulated program of cooperative learning and the richest vocabulary for it of any of the teachers considered for the study. Additionally, numerous other teachers at Banner used some form of small group learning, including Ms. Klein and Mrs. Ralston, whose classrooms are also described in this paper. Mr. Gallo, an Italian American in his mid-forties, was in his third year of teaching at the time data collection began. He had recently changed careers from business entrepreneurship to education. Ms. Klein, a Caucasian in her upper twenties, was in her fourth year of teaching, and taught language arts and reading. Mrs. Ralston, an African American in her mid-forties with sixteen years of teaching experience, taught math and reading.

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[1] Pseudonyms are used for all names related to the research site.

Banner's teachers and students were divided into two teams per grade, a common middle school structure (Lounsbury, 1992). Mr. Gallo and Ms. Klein worked with one other teacher and two special education teachers as part of one seventh grade team, Cluster B (Table 1). Mrs. Ralston worked with two other content area teachers as part of seventh grade Cluster A. Each of the clusters had class sizes which averaged about thirty-three students. However, the two clusters had markedly different distributions of students, with Cluster A being much higher in minority students, and Cluster B much higher in compensatory special program students, gifted and talented (GT) students and Caucasian students. The teachers explained this distribution as being primarily due to the Cluster B staff's desire to work with the compensatory special program students, and Ms. Klein's being the GT teacher. Both the compensatory special program and GT students were predominantly Caucasian.[2]

2 The very complex origins and effects of this skewed distribution of students are discussed at length in Deering, under review-a.

Table 1
Distribution of Seventh Grade Cluster Students by Cultural Subgroup

Cultural Subgroup	Cluster A (n = 110)	Cluster B (n = 109)
Special Program		
Non-classified	96%	63%
Compensatory (EBD, LD, DD, MH, SLH)[a]	0%	23%
Gifted & Talented	0%	14%
English as a Second Language[b]	4%	0%
Ethnicity/Race		
African American	4%	4%
Caucasian	40%	59%
Latino[c]	56%	37%

Note
(a) EBD -- emotionally/behaviorally disabled; LD -- learning disabled; DD -- developmentally disabled; MH -- multiple handicapped SLH -- severe learning handicapped.
(b) All were native speakers of Spanish.
(c) Approximately 98% of Latinos were Mexican American/Chicano.

Standard ethnographic methods were used, such as participant and non-participant observation, ethnographic interviews, document analysis, audio recording of verbal interactions, surveying the physical environment, and document analysis (Erickson, 1986b; Goetz & LeCompte, 1984). My nine years of middle school teaching provided me substantial entrée with school personnel. With students, I used a modification of Mandell's (1988) "Least-Adult" protocol, explaining my work as a "college project" to describe what it is like going to middle school. This non-authority role gave me considerable access to peer culture.

Data collection began during spring, 1990, and terminated in January, 1992. I was in the field for a total of 77 days. I conducted observations in classrooms, throughout the school and its grounds, and in the community. I typically recorded written fieldnotes during observations and then typed out and elaborated upon them nightly. I made over forty audio-recordings of various

events, including teacher lessons and student group work, all of which were transcribed for analysis. I conducted 30 formal, nonscheduled, standardized interviews with adults (educators and parents), and 28 with students (Goetz & LeCompte, 1984). I acquired classroom handouts, text pages, tests and quizzes, curriculum guides and policy statements. I took several rolls of still photos and drew maps of contexts where I observed frequently. I conducted seventy observations in Mr. Gallo's classroom, forty-four in Ms. Klein's and seven in Mrs. Ralston's. The lower total in Mrs. Ralston's class is due to her classroom having been used primarily for the purpose of triangulation with the other two in the original study. I continued to collect data until I found consistent repetition, indicating saturation (Erickson, 1986b).

Data analysis was guided by Erickson's (1982; Deering, 1989) multilevel theoretical framework for examining learning in its social context: 1) the general sociocultural system; 2) the immediate learning environment; and 3) individual functioning. Ericson maintains that subject matter and social interaction comprise the enacted curriculum within the immediate learning environment, and that each has both an explicit level and an implicit level. At the explicit level are the observable learning materials and actions of participants. The implicit level consists of the underlying patterns of curriculum -- the organization of subject matter, and the social participation structure. The structure of Ericson's framework plus the *a priori* concepts of cooperation and inclusion guided analysis of the data in this paper, and for much of the broader study. Patterns of behavior and belief related to cooperation and inclusion were examined across the framework in order to examine their consistency at the various levels of social organization and culture. The primary focus of this paper is on the immediate learning environment of the three classrooms, however, the articulation of these contexts with the general sociocultural system of Banner School and the Industry community is examined to provide contextual perspective.

Analysis was an ongoing process in this study, as I continuously developed tentative assertions about the nature and relationships of categories of data and subsequently sought refinement in them (Strauss & Corbin, 1990). I actively sought disconfirming evidence and triangulation for my assertions through varied data types (e.g., observations, documents, interviews) and sources (e.g., students, parents, educators; Goetz & LeCompte, 1984).

Numerous key informants provided regular feedback on the accuracy and representativeness of assertions drawn from the data.

Each of the three cases of cooperative learning instructional contexts is built around a vignette, a low-inference narrative representation of ethnographic data and analysis (Erickson, 1986b). These vignettes present typical elements of class sessions, in terms of organization of persons and materials, subject matter, social interaction, and the flow of events over time. Mr. Gallo and Ms. Klein provided me with written feedback on vignettes as well as on fieldnotes. Their vignette feedback addressed the following points: their gut reaction; an assessment of the accuracy of the portrayal of events, setting, actions and words of participants; an assessment of the vignette's typicality; and any recommendations to make the vignette more representative of the participants and setting. Mrs. Ralston declined to take part in formal feedback processes.

Findings

Banner Middle School

Banner is within visual and smelling distance of Industry's petroleum refineries, grain elevators, food processing plants and shot-and-beer bars. Banner draws students from a wide geographical area which encompasses a number of working class neighborhoods and a swath of a more middle class area. Despite its depressed physical and economic setting there was much to recommend Banner. The school environment was supportive of respect for persons, property, school achievement and diversity in several ways. The halls and general school environment were usually very clean and free of graffiti. A large amount of student products hung in the halls at all times, including permanent murals. In addition, a familial atmosphere pervaded Banner. It emanated from the principal, Ms. Kramer, a Caucasian and former bilingual education teacher. She, the secretaries and numerous teachers took to heart the middle school dictum to teach to the whole student -- head, heart, body (VanHoose & Strahan, 1991). Many adults in the school reached out to students formally through clubs, mentoring, peer counseling and student-of-the-month programs, and informally through hugs, lunch get-togethers and simply "lending an ear." Ms. Kramer and the school district strongly encouraged faculty's use of cooperative learning methods with frequent verbal support, financial support and release time for training.

Special program students at Banner were generally mainstreamed to a great extent. Students in the Emotionally and Behaviorally Disabled (EBD), Developmentally Disabled (DD), English as a Second Language (ESL), Gifted and Talented (GT), Learning Disabled (LD), Multiple Handicap (MH), Severe Learning Handicap (SLH) programs were in mainstream classes for the majority of the school day. This was usually accomplished with the support of adult specialists or peer tutors who attended class with their students or served as consultants to the regular teachers.

Students mixed fairly readily across ethnic lines in both classroom and social settings, and no ethnic/racially-motivated fights occurred during the three school years' of field work (see also Deering, under review-a). However, peer sorting by gender and special program membership was common in all contexts, with students tending to congregate with like peers. In addition, there was one peer social setting where competition and exclusivity were very strong factors -- school dances. At these events, only the most accomplished boy and girl dancers would dance, engaging in ritualistic competitions evocative of the mating rituals of Rocky Mountain elk.

Parents were almost universally in favor of having their children learn to work collaboratively in school. Most cited this as a necessity for succeeding in the workplace, whether a secretarial pool or diesel shop.

Tales of Three Cooperative Learning Classrooms

Data are presented here first as vignettes of life in each of the three classrooms. Next, some summarization of each classroom context is offered.

A Vignette of Cooperative Learning with Mr. Gallo: Show Me That You Want to Work in Groups!

Students pour into Mr. Gallo's classroom for 7th hour math. The desks are in groups of four. Students bolt to open desks and hold seats for their friends. Thirty-three students are present today, with two absent. Most of the groups end up being all-boy or all-girl but are about as mixed in ethnicity as possible.

Mr. Gallo enters the room with a furrowed brow and flashes the lights. A few students "Shhh" one another while others continue chatting. Mr. Gallo says loudly:

Quiet! It's my turn! You people have got to learn that when I flash those lights that it's time to get quiet! You guys don't know how to work together, and one of the first things that you have to learn is that you can't be messing around in your group. Now, you can have a lot of fun activities in group, but you've got to show me that you want to work in groups. Don't *tell* me, *show* me that you want to. If not, fine! We can have a real boring final six weeks! Today, I would like to do kind of a fun exercise with you. It's called the "Maze Daze." It's group work. [Mrs. Schultz, the LD/EBD teacher, enters quietly and stands by the side of the room.] The directions are, and I don't want to see anyone doing somebody else's work, you each have a green card. Each green card has three problems on it, you are not to bend. And, the only way that you will find yourself to enter the maze and get through the maze, is to find the treasure room, is that each one of you, find the correct answer to each one of your problems on the card. Now, I am going to force you to work together as groups. When you get your three problems finished, you are to circle the answer on the maze of each problem....You have to connect the lines of the correct answers. Now, I'm going to quickly review adding mixed numbers.

After finishing the instructions, Mr. Gallo sets the groups to work with a reminder to "help each other." There's an immediate bustle as students deal out the Maze Daze materials. Brenda says to Tina in her group, "Alright! I'm sure! Usually he gives us like fifty problems!"

A group of four boys talk over their math problems and the maze quite a bit. They gesture a lot toward each other's papers and tell each other to work fast so they can be first finished.

Next to them is a group of four boys. Two of them, one of them in the LD program, argue about who's the better rapper. The other two boys work together side by side on their math problems, talking them over quite a lot.

The four boys in Group 5 (one in the LD/EBD program) are laughing and joking. They keep arguing among themselves and with students in other groups. Much of their dialogue concerns who masturbates and who doesn't.

Lisa, a quiet, A-student is trying to figure out how to record and calculate her group member's quiz scores and averages on the chart in their FHF (Friends Helping Friends) notebook. She asks the others for help but none responds. Tim is working on his math problems and Sibela

is flirting with the boys in Group 5. Edison, who is in the LD program, keeps singing "Old MacDonald," much to Lisa's aggravation.

Mr. Gallo circulates around the room asking groups how they're doing. After ten minutes he goes and sits at his desk and does paper work.

Across the room, Group 3 is being taped-recorded -- Mónica and Nina, Chicanas, are working with Heather and Stacy, Caucasians. Each of them usually behaves in class, and all get average or better-than-average grades. All four girls talk about their task together [It was not possible to differentiate the speakers on this tape so they are simply denoted as "G" (girl)]:

G: Two and seventh-eighths equals....Do you need a pencil?

G: Uh-uh.

G: Six, you have to add those. This would be seven over sixty. Six plus five is eleven, eleven over nine. It would be seven and eleven over nine.

G: What the hell are we doing?

G: Oh, I'm sure.

Mr. Gallo [to whole class]: Remember that you've got to get the correct answers to each problem on your card. Otherwise you may not get to the treasure room with the correct route.

G: How do we do this?

G: I don't know.

G: I don't even know why we are supposed to learn this! That's why they invented calculators! They did, why do we have to learn this? In case we can't afford a calculator or what?

The girls continue talking and working together.

Billy, who is in the GT program, has all the cards from his group. He's really concentrating on finding the route through the maze but he's having a hard time. The rest of his group, Andy (also in GT), Luann and Sibela have completed their problems and are talking with each other.

Mike in Group 6 is doing pretty much the same as his GT class peer, Billy -- trying to solve the maze while the rest his group members talk and laugh.

Mrs. Schultz moves around the room, stopping in for a few minutes at a time with different groups. Mostly she checks to see that her special ed students (EBD and LD) are behaving and involved. The noise level in the room keeps escalating. Finally, Mr. Gallo dismisses the students to move on to Ms. Klein's class.

A Vignette of Cooperative Learning with Ms. Klein:
What Do We Do When We Conference?

The students bound into the room. Some go immediately to seats, while others look around anxiously. Ms. Klein calls out assignments for seats that are newly grouped into clusters of four. A few students complain and gag, but they go where she tells them and then begin to do the daily seat work on the board. Ms. Klein calls roll and then begins to lead the class in correcting the punctuation and grammar seat work. She gives her one of her trademark "Bonus Bucks" to Terry, a girl in the GT program, when Terry explains a grammar correction that no one else could. Twice Ms. Klein stops and quietly tells the class to quit chattering. Finally she says in a calm but frustrated tone, "OK, I just decided that we'll take five minutes to be quiet here." She and the class proceed to wait quietly for about three minutes. Afterwards Ms. Klein says in a serious tone:

> We're supposed to do some peer editing today but I'm worried about it. How many think you can do it? [All hands go up.] It's your choice. I'm just the facilitator here, which means I just try to help you learn. You're the ones who have to do it.

Ms. Klein calls the students group-by-group to quietly get their writing folders from a file in the back of the room. They do so quite noiselessly. In a couple minutes the students are all quiet, most with the myths they've been writing in front of them, and many of them writing. On an easel up front is the following chart:

1. Characters round/flat
2. Nature that explains certain happenings
3. Mans beginning
4. At least ONE page

During the writing time Joel asks Ms. Klein how to spell a word, but she tells him not to worry about that for two more stages. After twenty minutes of quiet writing, Ms. Klein calls for attention and addresses the class.

Ms. K.: What do we do when we conference?

Mike: Stay quiet.

Ms. K.: Yes, just *one* partner. What do you do after you pick a partner?

Heather: Let them read it?

Ms. K: Yes. They'll read their own myth out loud. Why?

Adam: So they can hear it?

Rusty: So if it's missing words they can tell.

Ms. K.: How do we offer feedback?

Stacy: Softly?

Steve: Circle it.

Ms. K.: And?

Lisa: Nicely.

Ms. K.: Yes, 'cause they might be offended. OK, I need to see a completed myth for you to get to work with a partner!

Students hold up their myths and Ms. Klein goes around assigning them to groups. About one-third of the students are ready. They conference on the floor, along the edge of the room and in adjoining desks. Ms. Klein tells the rest to keep on writing. Things start out pretty noisy in the crowded room but then settle down to a steady murmur.

Adam, a Chicano, and Ellen, a Caucasian work together. The sit under a table with the tape recorder running nearby.

Adam: OK, I'll read mine first. "The Golden Circle of the Sky." One day there was this beautiful woman...[several pages of story reading]...The grass started turning green, so that is why the sun is yellow and shines a glare like diamonds do into a mirror.

Ellen: Um, can you read the first part over about the dress. Because I think you said the dress was white.

A: Let me see. One day there was this beautiful woman with dark black hair, with white shiny teeth, fifteen rings on her hands, dressed in a purple blouse with a dress on. Dressed in a purple blouse with a dress on.

E: OK.

A: Now read yours.

E: Oh, great. Freeanesee.

A: Huh?

E: Freeanesee. Once long ago there was a goddess named Freeanesee...[several pages of story reading]...Later she met a very good and loving god, Ganeree. They fell in love and married. The end.

A: They fell in love and what?

E: And married. The end.

A: So, what is it talking about?

E: I don't know. There was a girl that had a curse on her and then there was this good goddess who broke the curse and threw a kindness arrow into a wicked--

A: Like do you mean, is it supposed to have one of those things like that's why. Well it don't have to have it, but it kind of--

E: She was the one that sort of loved everybody. She was a one who made the grass green and the sky blue. And put--and then at the end.

A: Was that Gangrene mean?

E: Ganaree turned the dead field into green grass....

The two discussed Ellen's story for another few minutes with Adam asking for explanations and offering suggestions.

During this time Ms. Klein has been going around checking in on writers and groups. She tells a couple of boys to get out paper and get started. She tells them she's angry because they've already had a couple classes to work on them. As the ninety-minute double period draws to a close, Ms. Klein tells the class to pack up their writing folders and get ready to leave. She dismisses the class with, "You did a good job today! I really like how you were conferencing. I

heard lots of good feedback being given. The rest of you need to get your stories finished! Alright, you may go." The students pile out into the hall and head for their next class.

A Vignette of Cooperative Learning with Mrs. Ralston:
See How Many Ways You Guys Come Up With When You All Work Together?!!!

Just down the hall from Mr. Gallo and Ms. Klein, are Mrs. Ralston's and the other Cluster-A classrooms. Students pour into Mrs. Ralston's room and make their way to their seats. They begin taking out notebooks and paper and talking excitedly. The five ESL students take desks in the last two rows by Miss Borraga, their interpreter. The students laugh and talk with her in Spanish. There are two colorful, eye-catching bulletin boards in the room, one with pictures and information about Martin Luther King, Jr., and another for Black Awareness Month.

Mrs. Ralston calls out, "OK! Let's get paper out and get going on the sponge!" A lot of students have already started, but now the rest get quiet and start working on the problems on the board. The problems involve calculating prime factors of two-digit numbers. Mrs. Ralston calls roll from her podium. Several students quietly check their work with their neighbors. After about five minutes, Mrs. Ralston booms, "Alright! Let's see what you got!" Hands shoot up, and she calls on a variety of students to give answers. Students mark their own papers, and when the review is done, Mrs. Ralston asks how many got a perfect score. Three-fourths of the students raise their hands. "Alright!" she exclaims, "What about the rest of you?!" A couple pipe up that they only missed one or two.

Roxy, a very popular Chicana dance star, collects the sponge papers. Mrs. Ralston passes out sets of story problems and then tells the class:

> These problems are tricky but they're fun! You've gotta read and decide what the directions tell you on this, and not just charge ahead and do it, 'cause that'll get you in trouble on the CTBS! You can do it! 'Cause you can all read TV Guide and the cable guide so I know you can read! [She and some of the students laugh at this] You don't need me to tell you how! The reason I'm taking the time to go over this with you is so that when you see something like this on the CTBS you'll know how. Be sure to show me your work! You can work together on this. I'll tell you who to work with.

The problems require the students to interpret data to discern levels and trends regarding radio sales, wildlife populations and other topics. Mrs. Ralston goes over the problems with the class and points out which charts and graphs to use for which problems. The only other talker is Miss Borraga who is quietly translating for her ESL group. After about eight minutes of explaining, Mrs. Ralston goes around and tells pairs of students to work together. Tina complains about being assigned to work with Mary, but Mrs. Ralston says, "Chill out! You all have to work together some time!" Tina rolls her eyes but then moves her desk next to Mary's. The room gets noisy for a moment as students begin moving desks and talking.

Roxy works with Mike, a Chicano, and Dorothy and Lisa, both Caucasians. Lisa sits off to the side.

Roxy: OK, who's gonna read it out? [problem 1]

[Mike reads the problem aloud.]

Roxy: It has to be 55 cents [incorrect].

Dorothy: No, you gotta break the price of the packages down.

Dorothy then shows Roxy how to use the chart to figure which price was cheapest per pencil while Lisa and Mike listen. They all talk it over and eventually choose the correct answer. As they start to write it down Mrs. Ralston comes over, and says, "I don't hear any talking here! Where's your work? I need to see that you can do it and then I don't have to worry!" The students show her their papers and she leaves. They continue working in two pairs and comparing answers. On problem four, they have to figure the total number of radios sold in one year from a chart. They all get different answers and begin arguing about how to do it. Roxy finally convinces them by going over her work step-by-step [correctly].

Mrs. Ralston goes to the next group, a boy and girl, watches them for a while and looks over their work.

Mrs. Ralston: See how many ways you guys come up with when you all work together?!

Susan: Yeah! This isn't so hard!

Mrs. R.: Yes!!! That's what I've been trying to tell you!!! Huh! Huh! Huh! [sounding like Eddie Murphy's laugh]

Some of the students imitate her laugh and giggle. She hears them and laughs even harder.

Mrs. Ralston notices that Lyle, a popular Caucasian dance star, is having problems. She tells him to work with Dorothy, a quiet, "nerdy" Caucasian. Lyle goes over to her, and as Dorothy starts explaining a problem they're joined by Nicole, a quiet Chicana. The three proceed to work together with Dorothy doing most of the explaining and Lyle and Nicole mostly listening.

Miss Borraga is working quietly with the ESL students translating the problems and answering questions. She spends a lot of time trying to get Ernesto and Paco to quit laughing and flirting, and start working. The girls in the group work quietly and steadily.

With a few minutes left in the class, Mrs. Ralston tells the students to put away their things and get ready to leave. They straighten their desks and put away materials. Mrs. Ralston asks how things went and a couple students blurt out, "OK," or "Easy!" She points out the homework on the board and tells them to be sure and bring the math sheets back tomorrow so they can finish. Then Mrs. Ralston says, "Alright, you can go!" The students bolt for the door.

Putting the Vignettes in Perspective

Mr. Gallo's Classroom

Mr. Gallo had his students work in groups during about one-third of my observations. He was acknowledged by Ms. Kramer and many other teachers to be a "cooperative learning expert." They noted his elaborate program and materials, and his training in cooperative learning (Kagan, 1989; Slavin, 1983) as evidence of his expertise. Several teachers, including Ms. Klein, regularly sought his advice on cooperative learning. Mr. Gallo called his cooperative learning approach, "Friends Helping Friends" (FHF). He described this program as being based on competitive "R and D teams" as in industry (see also, Deering, under review-b). The FHF program called for students to record and calculate averages of their quiz and test scores to compete for individual and group prizes such as pizza parties. Based on Slavin's (1983) approaches, students competed against their own averages and earned points for their teams when they improved, thus providing a theoretically equal competition, regardless of academic ability.

Cooperative learning, as well as whole class instruction, contained strong elements of individualism and competition in Mr. Gallo's classroom. This was particularly true for boys and GT students. They would often compete to be the first finished with academic tasks, whether

ostensibly working in groups or alone. Mike and Billy's control of group materials in the vignette was quite typical behavior for GT students. Compensatory special education students were often excluded from group tasks as a result.

Mr. Gallo's classroom was generally quite chaotic, as in the vignette, with many students engaged in what could only be described as misbehavior. Boys and compensatory special education students, especially those in the EBD program, were especially likely to be off-task. By contrast, Latino students and girls tended to stay on task more. Mr. Gallo's angry tirade at the beginning of the vignette was a common feature in his classroom.

Academic tasks in Mr. Gallo's class predominantly consisted of students working on large amounts of low cognitive level items from texts and prepared curricula (Bloom, 1956; Doyle, 1988). Math assignments usually called for students to complete numerous computation problems. Brenda's statement in the vignette that Mr. Gallo usually assigned "like fifty problems" was quite accurate. Social studies work typically consisted of filling in literal answers on worksheets, or copying definitions from text. Mr. Gallo elaborated on numerous occasions that he felt that learning, particularly in math, required numerous repetitions "like football or wrestling, where the more you practice, the better you do" (BMS 9/27/90).

Ms. Klein's Classroom

Ms. Klein had her students collaborate in small groups or pairs during about one-fourth of the class sessions I observed. Cooperative learning was a fairly simple process in her class. She would usually just tell the students to work together. She occasionally offered further detail on how to collaborate, as with her instructions and chart in the vignette. Despite being a cooperative learning protégé of Mr. Gallo's, however, Ms. Klein used no group accounting or reward structures. Her "Bonus Bucks" could be cashed in for small prizes such as pencils and erasers. They were associated with what little individualism and competition that could be discerned in Ms. Klein's classroom as the bucks went disproportionately to GT students, and were occasionally the source of student bickering.

Students were somewhat rambunctious in Ms. Klein's classroom, but generally obeyed her wishes. The same individuals and subgroups of students tended to present problems in her

classroom as in Mr. Gallo's classroom, in particular, boys and EBD students. Ms. Klein approached classroom management with a combination of positive rapport, Bonus Bucks, and occasional lunch detentions or time out for individuals or groups. Her positive demeanor was evident in frequent praise and encouragement, for example, at the end of the vignette.

Ms. Klein's language arts/reading curriculum was focused on a combination of developing basic skills, as with the seat work in the vignette, and promoting understanding and enjoyment of reading, writing, speaking and listening as with the myth writing and conferencing. Higher cognitive level tasks predominated in her classroom, and these included writing and illustrating autobiographies and myths, and reading self-selected trade books and constructing artistic means of sharing them.

Mrs. Ralston's Classroom

Life in Mrs. Ralston's classroom was more similar to Ms. Klein's than to Mr. Gallo's. For one, her approach to cooperative learning was quite simple. She used group work about as often as Ms. Klein, and also like her, used no accounting or reward structures. As in the vignette, Mrs. Ralston simply told students to work together and offered occasional reminders on how to do so. She seemed to regard student collaboration as a natural, even inevitable, process. When I asked her one time if her students would be collaborating during the next period's lesson, she replied with a laugh and a shrug, saying, "They always do!" (BMS 3/19/91).

Mrs. Ralston's classroom was far quieter and more orderly than Mr. Gallo's, and a bit more so than Ms. Klein's. Like Ms. Klein, Mrs. Ralston had a very positive manner with her students, which she combined with a booming voice and an effervescent personality. Laughter was a common element in her classroom.

Mrs. Ralston took her role as a minority educator very seriously. For example, she worked with some of her students to get them involved with the Afro American Male Conference. She had a large amount of curricular materials by and about minorities in her classroom. Additionally, she had a consultant from the "Steps Ahead" program come into her classroom on a regular basis to coach students on how to take standardized tests so that they might be able to attend college and move up in the world. Curriculum in Mrs. Ralston's classroom focused on a

blend of lower and higher cognitive level objectives. She typically opened class with some basic skills seat work. Then she and the students would often move on to more high level tasks, as in the vignette.

Summation Across Classroom Contexts

"Cooperative learning" took on widely disparate forms in the classrooms of Mr. Gallo, Ms. Klein and Mrs. Ralston. While Mr. Gallo and Ms. Klein taught the same group of students, their classroom cultures were markedly different. And though Mr. Gallo taught the same subject as Mrs. Ralston, his classroom culture was drastically different from hers. Interestingly, Ms. Klein and Mrs. Ralston's classroom cultures were the most similar of the threesome, even though they taught different subjects to different students who were distributed very differently across ethnic/racial and special program subgroups. A summation of classroom culture in terms of the subject matter and social participation structures across the three contexts is presented in Table 2.

Table 2
Cultural Features Across Three Classroom Contexts

	Classroom Context		
Cultural Feature	Mr. Gallo	Ms. Klein	Mrs. Ralston
Subject Matter			
Explicit	Math & Social Studies	Language Arts/Reading	Math
Implicit			
Cognitive Level	Low > High	High > Low	High > Low
Type of Work	Large quantities, emphasis on repetition and rote	Moderate quantities, emphasis on creativity and interest	Moderate quantities, emphasis on fun and standardized testing
Participation Structure			
Explicit			
Cooperative Learning	Complex; emphasis on accounting, competition, rewards	Simple; emphasis on task-based collaboration, and positive affect	Simple; emphasis on task-based collaboration
Implicit			
Inclusion	Much individualistic competition; exclusion of compensatory special program students from group tasks	Minimal individualistic competition; fairly ready mixing of students in cooperative groups	No observed competition; very ready mixing of students in cooperative groups; ESL students isolated in separate group
Classroom Management			
Teacher	Authoritarian; much teacher yelling; some tangible rewards, detentions	Humanistic; positive expectations and teacher demeanor; some tangible rewards, detentions	Humanistic; positive expectations and teacher demeanor; some detentions
Students	Lack of task engagement; chronic and extreme disruption	General engagement with tasks; moderate disruption	General engagement with tasks; moderate disruption

Discussion

Each of the teachers was using "cooperative learning" with seventh grade students. Despite some commonalties in student population, subject area, and purported teaching method, however, the three classroom cultures were quite different from each other. In particular, *cooperation* and *learning* took quite different forms across these contexts.

The subject matter curriculum in the three classrooms raises some interesting issues. At the explicit level, the quantity of work assigned to students was a highly salient factor. Mr. Gallo's curricular tasks, particularly in math, were driven by his belief that learning is akin to building up

mental muscles through repetition.[3] This belief is in direct conflict with current thinking about mathematics learning, which calls instead, for an emphasis on concrete, context-embedded tasks and a de-emphasis on decontextualized computation (Lampert, 1986; National Council of Teachers of Mathematics, 1989). As a result of Mr. Gallo's beliefs, students were overwhelmed by the sheer volume of his math tasks to the point that they became frustrated with them, many simply giving up.

Subject matter curriculum presented compelling issues at the implicit level as well. For one, the general cognitive level at which curriculum was presented in Mr. Gallo's classroom was markedly lower than in his two colleagues' classes. As a result, students in his classroom had little opportunity to learn at the more challenging and interesting complex cognitive levels (cf., Doyle, 1988). By contrast, Mrs. Ralston's students spent much of the time in math class on tasks of moderate quantity which called for complex mathematics problem solving. The charts they were analyzing in the lesson in the vignette were more like tasks they would encounter in non-classroom contexts, and more interesting, than were the numerous computation problems assigned Mr. Gallo's class. Ms. Klein's students also regularly engaged in complex cognitive tasks which required creative thinking, and application and learning of reading, writing, speaking and listening skills.

Paris, et al (1983) note that conditional knowledge, or awareness of why and/or when learning might be useful, is an important component of metacognition, as it contributes to flexible, appropriate application of learning. The girl in Mr. Gallo's class who blurted in frustration, "I don't even know why we are supposed to learn this!," clearly lacked conditional knowledge about the task. Only rarely did Mr. Gallo explicitly address application of learning. By contrast, Mrs. Ralston frequently offered standardized tests as a rationale for studying hard and learning. This hardly seems like an authentic application of learning. However, in the context of Mrs. Ralston's classroom, testing took on the role of "bootstraps" by which students might pull themselves up in life. Ms. Klein promoted conditional knowledge by frequently pointing out how the information and skills presented in her class could be utilized in tasks of interest to the students

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[3] For an analysis of the origins of these beliefs, and the mechanisims by which they were maintained in this context, see Deering, under review-b.

such as writing letters for free product samples and reading fun stories. In sum, the subject matter curriculum presented in Mrs. Ralston and Ms. Klein's classes was much more likely than Mr. Gallo's to promote interest, understanding and application of learning.

The social interaction in the three classrooms also offers striking insights. There is a marked contrast at the explicit level in terms of the cooperative learning approaches of the teachers. For Mr. Gallo, cooperative learning was an elaborate Program, with numerous, complicated procedures, and a raft of specialized materials. Blumenfeld and Meece (1988) have noted that complex procedures can distract students from lesson content, and this was certainly the case for Mr. Gallo's students. His FHF bookkeeping frequently dominated students' attention during lessons, precluding involvement with the academic lesson content. However, for both Ms. Klein and Mrs. Ralston, cooperative learning was a fairly simple, natural process. As Mrs. Ralston noted, the students tended to collaborate no matter what, and she happily accepted that. Ms. Klein and Mrs. Ralston simply used student collaboration when it fit with a particular activity or objective, rather than as an end in itself.

The dialogue and behavior of students in Mrs. Ralston's and Ms. Klein's classes reflected, among other things, fairly strong interest in the academic tasks. The collaboration on the math problems in Mrs. Ralston's class and the reading and critiquing of stories in Ms. Klein's class both involved prolonged discussion and sharing among students. In both these cases, and in many others in these classrooms, students shared information and ideas at complex cognitive levels, in part because the subject matter curriculum encouraged and supported it. Roxy's explanation of her reasoning on the math problems in Mrs. Ralston's class, and Ellen and Adam's checking for coherence in each other's myths in Ms. Klein's class both involved complex thinking and explanation. In addition, each teacher further scaffolded such discussion (Palincsar & Brown, 1984; Vygotsky, 1978) in several ways. Ms. Klein did so by providing the chart with guidelines for writing myths, in her prior discussion about positive feedback, and in her circulation around the room to check on student progress. Mrs. Ralston scaffolded her students' collaboration by exhorting them to work together, assigning them to *ad hoc* groups as needed, and insisting that they talk to one another and show their work. The high level discussion in these teachers' small groups is a very desirable aspect of group work as it is associated with strong gains in academic

achievement and metacognition (Palincsar & Brown, 1984; Webb, 1989). By contrast, the students' discussions tended to be of lower cognitive levels and of brief duration in Mr. Gallo's classroom, consistent with the cognitively simple, procedurally complex academic tasks.

Classroom management was also an area of social interaction which differed greatly across classrooms. At the explicit level, Mr. Gallo was again an outlier. Ms. Klein and Mrs. Ralston's more positive approaches are consistent with numerous sources on classroom management, and likely contributed to much of the order in their classrooms (Doyle, 1986; Glasser, 1986; Purkey & Strahan, 1986). The more engaging academic tasks in their classrooms surely helped to catch and hold students' interest as well. However, Mr. Gallo was not alone in having difficulty with maintaining order in his classroom. Ms. Klein and the other Cluster B teachers all had greater difficulty with classroom management than did Mrs. Ralston and other Cluster A teachers. The implicit level of social interaction offers some explanation for this phenomenon. Cluster B had all of the EBD students who were much more likely than their peers to be off-task in class and to incite others to join in disruption, thus making management much more challenging for these teachers. There was also a more subtle influence on classroom management associated with the composition of the two seventh grade clusters. The far greater proportion of Latino students in Mrs. Ralston's Cluster A appeared to give her and her colleagues an advantage in maintaining order in the classroom over their Cluster B counterparts. Latino students tended to obey their teachers and keep quiet in class to a far greater extent than their Caucasian peers. Several teachers explained this pattern as due to the Latino students coming from more traditional backgrounds than the Caucasians in terms of culture, respect for authority, and family structure. Thus, the composition of the student populations in the two seventh grade clusters contributed to quite different classroom management contexts.

Another salient facet of social interaction in this study concerns the concept of cooperation, and its instantiation at the implicit level. The degree to which students mixed with one another in classrooms across gender, ethnic and special program subgroups affected equality of access to learning opportunities. Students mixed quite readily across ethnic/racial subgroups in all three classrooms, and for the most part, throughout the entire school context. Students were more reluctant to mix across gender lines in all of these contexts, although this was not an

insurmountable issue when working in small groups in classes. Special program status presented more complex cooperation and inclusion issues than ethnicity and gender. The school's strong mainstreaming program put compensatory special program students in contact with their other peers on a regular basis, a very positive and inclusive feature of the school culture. However, special program membership was a salient factor in the sorting of students in every context, both in terms of explicit policy and implicit behavior patterns. In Mr. Gallo's classroom, the GT students responded with the greatest zeal of any subgroup to his business-oriented, competitive reward system, often to the point of excluding peers from participating in group tasks. At the same time, the compensatory special program students were the least desired as group members and were least likely to be included when students chose their own groups. They were also the most likely to be excluded from interactions in groups. As noted in the vignette, they often occupied themselves with horseplay instead of academic task engagement and group participation. The self-referenced improvement point system in Mr. Gallo's FHF Program might have overcome these tendencies in time if students had come to see how peers with low grade averages could contribute improvement points to team totals as readily as high-achieving peers (Slavin, 1983). However, Mr. Gallo only used the system sporadically, and it was very complicated so that students never got an idea how it was supposed to work. Thus, its impact was minimal. The tendency for students to exclude peers based on special program membership was also present in Ms. Klein's and other Cluster B classrooms. Ms. Klein's Bonus Bucks promoted some competition and exclusivity, but the pencils for which they could be exchanged were nothing compared to the pizza parties to which Mr. Gallo repeatedly referred. No other school context had anywhere near the degree of competitiveness and individualism of his pizza-hungry classroom.

There was also exclusion occurring in Mrs. Ralston's classroom associated with special program status. Her ESL students were always kept in a separate group with Miss Borraga even though there were many students in the school and cluster who were bilingual. The ESL students could have been dispersed to work in language-heterogeneous groups. This might have contributed to a broad array of benefits, including improved relations across ethnic and language subgroups (Cummins, 1986; Slavin, 1983). Integrating the ESL students into language-heterogeneous groups might have helped ease their social isolation in non-classroom contexts as

well, for example the lunch room. It would have also provided bilingual students the opportunity to practice their Spanish, and to do more explaining of academic concepts, thus enhancing their learning (Webb, 1989). Monolingual English-speakers would have been exposed to Spanish as well, and perhaps picked some up. Also, dispersing the ESL students into heterogeneous groups would have lessened their dependence on Miss Borraga, and likely have helped in their acquisition of English through practice in meaningful interaction (McGroarty, 1989). It would also have removed them from the modified direct-instruction which Miss Borraga provided and availed them of the benefits of discussion of academic tasks and negotiation of meaning that cooperative learning can provide (Cohen, 1991; Palincsar, Stevens and Gavelek, 1989).

Another notable cooperation/inclusion issue underlying the social participation structure of cooperative learning concerned students' status within peer culture. It was quite striking how the school dance stars were so willing to work with low-status peers in Mrs. Ralston's classroom. This stood in stark contrast to their regal aloofness in other contexts. Her great rapport with her students and her strong will probably had much to do with these students' collegiality in her classroom.

Conclusions

This study suggests that the subject matter and social participation structure of cooperative learning (and perhaps any instructional approach) are inextricably linked. Cooperative learning approach, subject matter, academic tasks, students' behavior and interactions, teachers' management styles and myriad other factors interacted in the three classrooms to constitute the enacted curricula, each providing markedly different learning opportunities. Several general conclusions can be drawn from the three instructional contexts.

One strong implication of this study is that competition should be carefully scrutinized before teachers use it to motivate students as Mr. Gallo did. Rather than promoting team unity, it appeared to exacerbate at least some students' well-developed inclinations toward competition and individualism. As noted, Mr. Gallo's FHF Program might have overcome these tendencies if he had ever gotten the program fully up and running. However, it seems safe to conclude that the flexible group membership and ready sharing across groups that typified Mrs. Ralston's classroom

would not occur under any competitive system. Indeed, her and Ms. Klein's success at eliciting student collaboration with very simple approaches to group work questions the necessity of the elaborate incentive systems advocated by Mr. Gallo and Slavin (1983). It also casts some doubt on the necessity of team-building and group processing structures advocated by numerous other cooperative learning proponents (e.g., Johnson & Johnson, 1987; Kagan, 1989). Mrs. Ralston and Ms. Klein used no official cooperative learning structures whatsoever, yet they elicited regular, ongoing, high-level collaboration among students of different racial/ethnic, gender, special program and social status subgroups. These teachers simply established and maintained learning environments characterized by positive teacher expectations, warm rapport, and academic tasks that were at least fairly interesting and cognitively challenging.

The various explicit cooperative learning structures and approaches (Johnson & Johnson, 1987; Kagan, 1989; Slavin, 1983) might promote very positive processes and outcomes with teachers more competent than Mr. Gallo and might be very useful in particular circumstances. However, the success of Mrs. Ralston and Ms. Klein without any such formal structures, at the very least demonstrates that they are not always essential. Such a statement is unlikely to emerge from the mainstream cooperative learning paradigm which puts forth ever-more-elaborate structures in ever-more-well-packaged training programs and publications (cf., International Association for the Study of Cooperation in Education, 1993; Sapon-Schevin, Schniedewind, 1991). Contrary to the claims of many such training programs, cooperative learning is a context-embedded process which cannot simply be "implemented" without consideration of the student population and the explicit and implicit levels of subject matter and social interaction. This study makes it readily apparent that cooperative learning approaches will not transform ill-conceived academic tasks into transcendent learning opportunities. It also points out that educators need to be alert to patterns of exclusion which may develop in their classrooms and cooperative groups. Finally, they must examine the articulation of their classroom norms with broader school contexts if cooperative learning is to truly live up to its name.

"Cooperative learning" can indeed, be either, both or neither. It can be characterized by cooperation or competition, inclusion or exclusion, and by plentiful or rare significant learning opportunities for students. It is a powerful, and increasingly popular instructional approach which

can serve to empower or disempower students. Cooperative learning therefore demands much more critical analysis from practitioners and researchers.

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